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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/580,062	02/12/2007	Michael Hopkinson	70347	3537
85981 Syngenta Corp	7590 08/23/201 Protection. Inc.	EXAMINER		
410 Swing Road			BROWN, COURTNEY A	
Greensboro, NC 27409			ART UNIT	PAPER NUMBER
			1617	
			MAIL DATE	DELIVERY MODE
			08/23/2011	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)				
Office Action Cummens	10/580,062	HOPKINSON ET AL.				
Office Action Summary	Examiner	Art Unit				
	COURTNEY BROWN	1617				
The MAILING DATE of this communication appears on the cover sheet with the correspondence address Period for Reply						
A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION. - Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication. - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication. - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).						
Status						
1) Responsive to communication(s) filed on 15 Ju	ne 2011					
·=		set forth during the interview on				
, <u> </u>						
; the restriction requirement and election have been incorporated into this action. 4) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is						
4) Since this application is in condition for allowan closed in accordance with the practice under E	•					
Disposition of Claims	x parto Gaaylo, 1000 O.D. 11, 10	56 G.G. 216.				
5) Claim(s) <u>1-5,8-12 and 14-23</u> is/are pending in t						
5a) Of the above claim(s) is/are withdrawn from consideration.						
6) Claim(s) is/are allowed.						
7) Claim(s) <u>1-5,8-12 and 14-23</u> is/are rejected.						
	Claim(s) is/are objected to.					
9) Claim(s) are subject to restriction and/or election requirement.						
Application Papers						
10) ☐ The specification is objected to by the Examiner.						
11) The drawing(s) filed on is/are: a) accepted or b) objected to by the Examiner.						
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).						
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).						
12) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.						
Priority under 35 U.S.C. § 119						
13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).						
a) ☑ All b) ☐ Some * c) ☐ None of:						
1. ☐ Certified copies of the priority documents have been received.						
2. Certified copies of the priority documents have been received in Application No						
3. Copies of the certified copies of the priority documents have been received in this National Stage						
application from the International Bureau (PCT Rule 17.2(a)).						
* See the attached detailed Office action for a list of the certified copies not received.						
Attachment(s)	* D	(WTW 140)				
Notice of References Cited (PTO-032) Notice of Draftsperson's Patent Drawing Review (PTO-948)	4) Interview Summary Paper No(s)/Mail Da					
3) Information Disclosure Statement(s) (PTO/SB/08)	5) 🔲 Notice of Informal P					
Paper No(s)/Mail Date	6) Other:					

DETAILED ACTION

Acknowledgement of Receipt/Status of Claims

This Office Action is in response to the amendment filed June 15, 2011. Claims 1-5, 8-12 and 14-23 are pending in the application. Claims 6,7 and 13 have been cancelled. Claims 1-5, 8-12 and 14-23 are being examined for patentability.

Maintained Rejections

Applicant's arguments filed June 15, 2011 are acknowledged and have been fully considered.

The following rejections and/or objections are either reiterated or newly applied. They constitute the complete set of rejections and/or objections presently being applied to the instant application. The rejection of claims 1-5,8-12 and 14-23 under 35 U.S.C. 103(a) as being unpatentable over Wichert et al. (US 6,890,889 B1) in view of Cones (US 6,924,250 B2) and further in view of Burke (US Patent 5,620,678) and Ferrett et al. (US 2001/0051591 A1) is maintained.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

- 1. Determining the scope and contents of the prior art.
- 2. Ascertaining the differences between the prior art and the claims at issue.
- 3. Resolving the level of ordinary skill in the pertinent art.
- Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-5,8-12 and 14-23 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Wichert et al. (US 6,890,889 B1, of record) in view of Cones (US 6,924,250 B2, of record) and further in view of Burke (US Patent 5,620,678, of record) and Ferrett et al. (US 2001/0051591 A1, of record).

Applicant's Invention

Applicant claims a pesticide concentrate comprising: a) 2-85% by weight water; b) 5-90% by weight of at least one pesticide comprising mesotrione, an agriculturally acceptable salt of mesotrione or a metal chelate of mesotrione; c) an amount of an ionic nitrate salt additive effective in reducing corrosion of metal surfaces, said ionic nitrate salt additive comprising ammonium nitrate; and d) optionally, other formulation auxiliaries; wherein the ratio of component c) to component b) is less than or equal to 0.3:1.

Determination of the scope and the content of the prior art (MPEP 2141.01)

Wichert et al. teach herbicidal formulations comprising: (A) mesotrione (2-[4-methylsulfonyl-2-nitrobenzoyl]-I, 3-cyclohexanedione); (B) about 0.3 to about 2.5 percent of crop oil concentrate or about 0.3 to about 2.5 percent of methylated seed oil; (C) about 0.5 to about 5% of a urea ammonium nitrate on a volume to volume basis based on the total of (A), (B), (C), (D) and a diluent (abstract, limitation of instant claims 1,14 and 18). Wichert et al. teach the use of water as the diluent component (column 2, line 32, and claims 1, 9 and 10 of instant application). Wichert et al. teach applying

the aforementioned formulation to the locus of desired vegetation (column 3, lines 14-18, limitation of instant claim 12) and the use of an additional herbicide, Acetochlor, formulated with mesotrione in a premix (column 2, line 58, claim11 of instant application). Additionally, Wichert et al. teach the use of buffers to control pH (column 2, lines 32-41) as well as a non-ionic surfactant (limitation of instant claims 22 and 23).

Ascertainment of the difference between the prior art and the claims (MPEP 2141.02)

One difference between the invention of the instant application and that of Wichert et al. is that Wichert et al. does not expressly teach the use of 5-90% of a copper or zinc chelate of mesotrione (limitation of instant claims 1,3,8,15,16 and 20) and the use of a further active selected from a herbicide, fungicide, insecticide, acaricide and nematicide (limitation of instant claim 11). However, the use of 5-90% of a copper or zinc chelate of mesotrione was known in the prior art. For example, Cornes teaches that pesticide formulations comprising mesortione may contain as little as about 0.5% to as much as 95% or more in a synergistic combination of mesotrione and a second herbicide (column 4, lines 25-29, limitation of instant claim 11). Cornes teaches that, when used in the form of a chelate, mesotrione is most preferably used in the form of a copper chelate (column 2, lines 11-16). Cornes teaches that their synergistic combination could be formulated as an aerosol (column 5, lines 18-25).

A second difference between the invention of the instant application and that of Wichert et al. is that Wichert et al. does not expressly teach the claimed ratio of the

ionic nitrate salt additive to the pesticide component wherein the ratio is less than or equal to 0.3:1 as well as an amount of water in the amount of 2-85% (limitation of instant claims 1,15 and 20) However, Burke teaches various formulations of insecticidal aerosols. Specifically, Burke teaches a formulation comprising 1.25 % pyrethrum as an insecticide component, 0.300% Oleamide DEA as a corrosion inhibitor component and 33.172 % deionized water (see Example IV, column 3, lines 50-60). Burke teaches that the aerosol insecticidal composition consists essential of organophosphate active insecticidal ingredient in the range of 0.01%-10% (see claim 1 of Burke) and that the aerosol may include sodium nitrate as a corrosion inhibitor (see column 2, lines 32-34).

A third difference between the invention of the instant application and that of Wichert et al. is that Wichert et al. does not expressly teach that the pH of the composition is 6 or less (limitation of instant claims 2 **and 17**). However, Hudson teaches that **corrosion protection is retained at lower pH values** when comparing compositions in a pH range of 6.8 and 7.2 which would result if the solutions were stored for long periods and the ammonia was allowed to vent (column 6, table 4).

A fourth and final difference between the invention of the instant application and that of Wichert et al. is that Wichert et al. does not expressly teach the use of an auxiliary in the form of an alkali metal or alkaline earth metal chloride (limitation of instant claims 4, 5, 22 and 23). However, Ferrett et al. teach the preferred salts use of a calcium chloride, sodium chloride, potassium chloride salts in compositions and

methods for safening crops subjected to a class of herbicidally active compounds ([0018]).

Finding of prima facie obviousness Rationale and Motivation (MPEP 2142-2143)

It would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of Wichert et al. and Cones and use about 0.5% to as much as 95% or more in a synergistic combination of a copper chelate of mesotrione and a second herbicide. Cornes teaches that formulations comprising mesortione may contain as little as about 0.5% to as much as 95% or more in a synergistic combination of mesotrione and a second herbicide (column 4, lines 25-29). Thus, one would be motivated to devise a composition that would provide an herbicidal synergistic combination as well as prevent corrosion. The claims would have been obvious because a person of ordinary skill in the art would have been motivated to combine the prior art to achieve the claimed invention and that there would have been a reasonable expectation of success. Therefore, the claimed invention as a whole would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made because every element of the invention has been fairly suggested by the cited reference.

It would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of Wichert et al. and Burke and use he claimed ratio

of the ionic nitrate salt additive to the pesticide component wherein the ratio is less than or equal to 0.3:1 as well as an amount of water in the amount of 2-85%. Burke teaches that in water-solvent-based aerosol compositions, the corrosion inhibitor is added to protect the aerosol can from corrosion which would otherwise occur due to the can's contact with the water ingredient (column 3, lines 2-5). The claims would have been obvious because the substitution of one pesticide for another pesticide would have yielded predictable results to one of ordinary time skill in the art at the time of the invention. One of ordinary skill in the art would have been motivated to make such a substitution with the expectation of formulation a water-solvent-based aerosol composition that does not corrode the aerosol can during use. Therefore, the claimed invention as a whole would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made because every element of the invention has been fairly suggested by the cited reference.

It would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of Wichert et al. and Huduson and use pH of that is 6 or less. Hudson teaches that **corrosion protection is retained at lower pH values** when comparing compositions in a pH range of 6.8 and 7.2 which would result if the solutions were stored for long periods and the ammonia was allowed to vent (column 6, table 4). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to engage in routine experimentation to determine optimal or workable pH ranges that produce expected results. Where the general conditions of a claim are

disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation. In re Aller, 220 F. 2d 454, 105 USPQ 233 (CCPA 1955).

It would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of Wichert et al. and Ferrett et al. and use an auxiliary in the form of an alkali metal or alkaline earth metal chloride. Ferrett et al. teach that salts such as sodium chloride can provide the cations necessary for safening a plant from phytotoxic injury caused by at least one N-phosphonomethyl-glycine when the salt is applied to a locus of a plant for which safening is desired. One of ordinary skill in the art would be motivated to make this combination with the expected benefit of safening a plant from phytotoxic injury caused by mesitrione and/or mesitrione chelate compounds.

In light of the forgoing discussion, the Examiner concludes that the subject matter defined by the instant claims would have been obvious within the meaning of 35 USC 103(a).

From the teachings of the references, it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention. Therefore, the invention as a whole was *prima facie* obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the references, especially in the absence of evidence to the contrary.

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Examiner's Response to Applicant's Remarks

Applicant's arguments filed on June 15, 2011, with respect to the 103 rejection of claims 1-5,8-12 and 14-23 as being unpatentable over Wichert et al. (US 6,890,889 B1) in view of Cones (US 6,924,250 B2) and further in view of Burke (US Patent 5,620,678) and Ferrett et al. (US 2001/0051591 A1) have been fully considered but they are not persuasive. Applicant argues that the teaching of Wichert is directed to mesotrione formulations comprising (i) mesotrione and (ii) urea ammonium nitrate or ammonium sulfate fertilizer. When urea ammonium nitrate is present in the disclosed formulations, Applicant argues that the teaching of Wichert specifically instructs one skilled in the art to formulate mesotrione compositions so as to have a weight ratio of ammonium nitrate salt to mesotrione much higher than Applicants' recited weight ratio of ionic nitrate salt additive (i.e., component c) to at least one pesticide (i.e., component b). Applicant argues that even when the teaching of Wichert is viewed most favorably to the Examiner's position, the teaching of Wichert still instructs one skilled in the art to utilize a minimum ratio of ammonium nitrate salt to mesotrione of at least 0.53:1, substantially greater than the "less than or equal to 0.3:1" ratio as recited in Applicants' claimed invention. However, the Examiner is not persuaded by Applicant's argument because the secondary teaching of Burke was joined to show that a composition comprising the claimed ratio of the ionic nitrate salt additive to the pesticide component wherein the ratio is less than or equal to 0.3:1 was known at the time the instant invention was filed.

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Specifically, Burke teaches various formulations of insecticidal aerosols. Burke teaches a formulation comprising 1.25 % pyrethrum as an insecticide component, 0.300% Oleamide DEA as a corrosion inhibitor component and 33.172 % deionized water (see Example IV, column 3, lines 50-60). Burke teaches that the aerosol insecticidal composition consists essential of organophosphate active insecticidal ingredient in the range of 0.01%-10% (see claim 1 of Burke) and that the aerosol may include sodium nitrate as a corrosion inhibitor (see column 2, lines 32-34). Burke further teaches that in water-solvent-based aerosol compositions, the corrosion inhibitor is added to protect the aerosol can from corrosion which would otherwise occur due to the can's contact with the water ingredient (column 3, lines 2-5). Therefore, the use of the claimed ratio of an ionic nitrate salt additive to a pesticide component wherein the ratio is less than or equal to 0.3:1 would have been obvious to one of ordinary skill in the art at the time the instant invention was filed.

Next, Applicant argues that the Office Action suggests that one skilled in the art would have been motivated to utilize the oleamide DEA to pyrethrum weight ratio of about 0.30:1.25 disclosed in Example IV of Burke for the weight ratio of ammonium nitrate to mesotrione in the teaching of Wichert instead of Wichert's specific teaching of using a greater than 0.53:1 weight ratio of ammonium nitrate to mesotrione. Applicant argues that it is difficult to understand why one skilled in the art, given the specific teaching within Wichert, would have ignored the specific teaching of Wichert with regard to using a greater than 0.53:1 weight ratio of ammonium nitrate to mesotrione, and

instead utilized Burke's disclosed weight ratio for oleamide DEA to pyrethrum weight ratio (i.e., 0.30:1.25 oleamide DEA to pyrethrum). Applicant argues that the only motivation for (1) ignoring the specific teaching of Wichert and (2) using Burke's disclosed weight ratio for oleamide DEA to pyrethrum weight ratio in place of Wichert's greater than 0.53:1 weight ratio of ammonium nitrate to mesotrione, a has been gleaned from Applicants' original specification, not from the art of record. However, the Examiner is not persuaded by Applicant's argument because Burke teaches that the aerosol insecticidal composition consists essential of organophosphate active insecticidal ingredient in the range of 0.01%-10% (see claim 1 of Burke) and that the aerosol may include sodium nitrate as a corrosion inhibitor (see column 2, lines 32-34). Burke teaches that in water-solvent-based aerosol compositions, the corrosion inhibitor is added to protect the aerosol can from corrosion which would otherwise occur due to the can's contact with the water ingredient (column 3, lines 2-5). Therefore, the use of the claimed ratio of the ionic nitrate salt additive to the pesticide component wherein the ratio is less than or equal to 0.3:1 would have been obvious to one of ordinary skill in the art at the time the instant invention was filed.

Further, Applicant argues that it is difficult to understand why one skilled in the art, given the teaching of Wichert with regard to pH in column 2, lines 42-60, would have (1) sought out the teaching of Hudson directed to liquid fertilizer compositions, and (2) utilized a pH range of below 6 in Wichert's mesotrione formulations because Hudson uses a similar pH range for the disclosed liquid fertilizer compositions. However, the Examiner is not persuaded by Applicant's arguments. In response to applicant's

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argument that it is difficult to understand why one skilled in the art, given the teaching of Wichert with regard to pH in column 2, lines 42-60, would have (1) sought out the teaching of Hudson, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See In re Keller, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). The examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and In re Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Hudson teaches that corrosion protection is retained at lower pH values when comparing compositions in a pH range of 6.8 and 7.2 which would result if the solutions were stored for long periods and the ammonia was allowed to vent (column 6, table 4). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to engage in routine experimentation to determine optimal or workable pH ranges that produce expected results.

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In addition, Applicant argues that it is difficult to understand why one skilled in the art, given the teaching of Wichert directed to mesotrione formulations, would have (1) sought out the teaching of Ferrett directed to methods of safening crops from the phytotoxic effects of glyphosate by utilizing specific ionic salts in combination with the glyphosate (see, Ferrett, paragraphs [0017]-[0018]); and (2) incorporated one of Ferrett's disclosed ionic salt safeners (for glyphosate) into Wichert's mesotrione formulations. However, the Examiner is not persuaded by Applicant's arguments. In response to applicant's argument that it is difficult to understand why one skilled in the art, given the teaching of Wichert directed to mesotrione formulations, would have (1) sought out the teaching of Ferrett ,the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See In re Keller, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). The examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and In re Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Ferrett et al. teach that salts such as sodium chloride can provide the cations necessary for safening a plant from phytotoxic injury caused by at least one N-phosphonomethyl-

glycine when the salt is applied to a locus of a plant for which safening is desired. One of ordinary skill in the art would be motivated to make this combination with the expected benefit of safening a plant from phytotoxic injury caused by mesitrione and/or mesitrione chelate compounds.

Lastly, Applicant argues that even if the proposed combination of the teaching of Wichert with the teachings of Comes, Burke, Hudson and Ferrett were deemed proper, the proposed combination of the teaching of Wichert with the teachings of Comes, Burke, Hudson and Ferrett would still fail to teach or suggest an ammonium nitrate salt additive in a pesticide concentrate at a ratio of less than or equal to 0.3:1 (i.e., ammonium nitrate salt additive to pesticide) as recited in Applicants' claimed invention. Applicant argues that any combination of the teaching of Wichert with the teachings of Comes, Burke, Hudson and Ferrett would not alter the disclosed ratio of components (i.e., pesticide, UAN solution, and AN content relative to diluent) suggested in the teaching of Wichert. For at least this reason, Applicant argues that the proposed combination of the teaching of Wichert with the teachings of Comes, Burke, Hudson and Ferrett, even if proper, fails to make obvious Applicants' claimed invention. However, the Examiner disagrees with Applicant's argument. Burke teaches that the aerosol insecticidal composition consists essential of organophosphate active insecticidal ingredient in the range of 0.01%-10% (see claim 1 of Burke) and that the aerosol may include sodium nitrate as a corrosion inhibitor (see column 2, lines 32-34). Burke teaches that in water-solvent-based aerosol compositions, the corrosion inhibitor is

added to protect the aerosol can from corrosion which would otherwise occur due to the can's contact with the water ingredient (column 3, lines 2-5). Cornes teaches that formulations comprising mesortione may contain as little as about 0.5% to as much as 95% or more in a synergistic combination of mesotrione and a second herbicide (column 4, lines 25-29). Thus, one would be motivated to devise a composition that would provide a herbicidal synergistic combination as well as prevent corrosion and the proposed combination of the teaching of Wichert with the teachings of Comes, Burke, Hudson and Ferrett does teach or suggest an ammonium nitrate salt additive in a pesticide concentrate at a ratio of less than or equal to 0.3:1 (i.e., ammonium nitrate salt additive to pesticide) as recited in Applicants' claimed invention.

In light of the forgoing discussion, the Examiner concludes that the subject matter defined by the instant claims would have been obvious within the meaning of 35 USC 103(a).

Conclusion

No claims are allowed.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Courtney A. Brown whose telephone number is 571-270-3284. The examiner can normally be reached on 9:00 am-5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Fereydoun Sajjadi can be reached on 571-272-3311. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

/JANET L. EPPS -SMITH/ Primary Examiner, Art Unit 1633

Courtney A. Brown Patent Examiner Technology Center 1600 Group Art Unit 1617